

ABSTRACT

A system for creating a virtual model of a physical structure in accordance with the present invention comprises a baseboard; at least one sensor providing sensor data; at least one building component capable of being sensed by the sensor and mountable on the baseboard; a computer interfaced with and receiving data from the sensor, for determining the position and dimensions of each component mounted on the baseboard based on the sensor data; and wherein the computer creates a virtual model to be displayed on a computer display of a structure composed of each of the components mounted on the baseboard based on the position and dimensions of each of the components. The building components comprise electrical contact points having electrical signatures. The sensor is a circuit board connected to a power source and comprises a voltmeter, an ammeter, a switching network and a processor receiving data from the voltmeter and for controlling the voltmeter, ammeter and the switching network. The sensor senses the electrical signature, location and orientation on the circuit board of each building component.